

Arg Asp Lys Ala Leu Ala Tyr Ala Lys Gly Ile Gly Gly Ala Arg Ala
 165 170 175
 ggc gta tta gaa acg aca ttt aaa gaa gaa aca gaa aca gat ttg ttc 576
 Gly Val Leu Glu Thr Thr Phe Lys Glu Glu Thr Glu Thr Asp Leu Phe
 180 185 190
 ggt gag caa gca gtt ctt tgc ggc gga tta agc gcg ctt gtc aaa gcc 624
 Gly Glu Gln Ala Val Leu Cys Gly Gly Leu Ser Ala Leu Val Lys Ala
 195 200 205
 gga ttt gaa acc tta act gaa gca ggt tat cag cct gaa ctt gca tac 672
 Gly Phe Glu Thr Leu Thr Glu Ala Gly Tyr Gln Pro Glu Leu Ala Tyr
 210 215 220
 ttc gag tgt ctt cat gag ctg aaa tta atc gta gac ctt atg tac gaa 720
 Phe Glu Cys Leu His Glu Leu Lys Leu Ile Val Asp Leu Met Tyr Glu
 225 230 235 240
 gaa gga ctt gca gga atg aga tat tca atc tct gac aca gca cag tgg 768
 Glu Gly Leu Ala Gly Met Arg Tyr Ser Ile Ser Asp Thr Ala Gln Trp
 245 250 255
 gga gat ttc gta tca ggc cct cgc gtt gtg gac gcc aaa gta aaa gaa 816
 Gly Asp Phe Val Ser Gly Pro Arg Val Val Asp Ala Lys Val Lys Glu
 260 265 270
 tct atg aaa gaa gta tta aaa gat atc caa aac ggt aca ttc gca aaa 864
 Ser Met Lys Glu Val Leu Lys Asp Ile Gln Asn Gly Thr Phe Ala Lys
 275 280 285
 gag tgg atc gtc gaa aac caa gta aac cgt cct cgt ttc aac gct atc 912
 Glu Trp Ile Val Glu Asn Gln Val Asn Arg Pro Arg Phe Asn Ala Ile
 290 295 300
 aat gca agc gag aac gaa cat caa atc gaa gta gtg gga aga aag ctt 960
 Asn Ala Ser Glu Asn Glu His Gln Ile Glu Val Val Gly Arg Lys Leu
 305 310 315 320
 cgt gaa atg atg ccg ttt gtg aaa caa ggc aag aag gaa gca gtc 1008
 Arg Glu Met Met Pro Phe Val Lys Gln Gly Lys Lys Glu Ala Val
 325 330 335
 gtc tcc gtt gcg caa aat taa 1029
 Val Ser Val Ala Gln Asn
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<210> 36
 <211> 342
 <212> PRT
 <213> *Bacillus subtilis*

<400> 36
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 Gly Lys Thr Val Ala Val Ile Gly Tyr Gly Ser Gln Gly His Ala His
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 Ala Leu Asn Leu Lys Glu Ser Gly Val Asp Val Ile Val Gly Val Arg

35

40

45

Gln Gly Lys Ser Phe Thr Gln Ala Gln Glu Asp Gly His Lys Val Phe
 50 55 60
 Ser Val Lys Glu Ala Ala Ala Gln Ala Glu Ile Ile Met Val Leu Leu
 65 70 75 80
 Pro Asp Glu Gln Gln Lys Val Tyr Glu Ala Glu Ile Lys Asp Glu
 85 90 95
 Leu Thr Ala Gly Lys Ser Leu Val Phe Ala His Gly Phe Asn Val His
 100 105 110
 Phe His Gln Ile Val Pro Pro Ala Asp Val Asp Val Phe Leu Val Ala
 115 120 125
 Pro Lys Gly Pro Gly His Leu Val Arg Arg Thr Tyr Glu Gln Gly Ala
 130 135 140
 Gly Val Pro Ala Leu Phe Ala Ile Tyr Gln Asp Val Thr Gly Glu Ala
 145 150 155 160
 Arg Asp Lys Ala Leu Ala Tyr Ala Lys Gly Ile Gly Gly Ala Arg Ala
 165 170 175
 Gly Val Leu Glu Thr Thr Phe Lys Glu Glu Thr Glu Thr Asp Leu Phe
 180 185 190
 Gly Glu Gln Ala Val Leu Cys Gly Gly Leu Ser Ala Leu Val Lys Ala
 195 200 205
 Gly Phe Glu Thr Leu Thr Glu Ala Gly Tyr Gln Pro Glu Leu Ala Tyr
 210 215 220
 Phe Glu Cys Leu His Glu Leu Lys Leu Ile Val Asp Leu Met Tyr Glu
 225 230 235 240
 Glu Gly Leu Ala Gly Met Arg Tyr Ser Ile Ser Asp Thr Ala Gln Trp
 245 250 255
 Gly Asp Phe Val Ser Gly Pro Arg Val Val Asp Ala Lys Val Lys Glu
 260 265 270
 Ser Met Lys Glu Val Leu Lys Asp Ile Gln Asn Gly Thr Phe Ala Lys
 275 280 285
 Glu Trp Ile Val Glu Asn Gln Val Asn Arg Pro Arg Phe Asn Ala Ile
 290 295 300
 Asn Ala Ser Glu Asn Glu His Gln Ile Glu Val Val Gly Arg Lys Leu
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 325 330 335
 Val Ser Val Ala Gln Asn
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<211> 1674

<212> DNA

<213> Bacillus subtilis

<220>

<221> CDS

<222> (1)..(1674)

<400> 37

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Met	Ala	Glu	Leu	Arg	Ser	Asn	Met	Ile	Thr	Gln	Gly	Ile	Asp	Arg	Ala	
1	5						10					15				

ccg	cac	cgc	agt	ttg	ctt	cgt	gca	gca	ggg	gta	aaa	gaa	gag	gat	ttc	96
Pro	His	Arg	Ser	Leu	Leu	Arg	Ala	Ala	Gly	Val	Lys	Glu	Glu	Asp	Phe	
20				25							30					

ggc	aag	ccg	ttt	att	gcg	gtg	tgt	aat	tca	tac	att	gat	atc	gtt	ccc	144
Gly	Lys	Pro	Phe	Ile	Ala	Val	Cys	Asn	Ser	Tyr	Ile	Asp	Ile	Val	Pro	
35				40						45						

ggt	cat	gtt	cac	ttg	cag	gag	ttt	ggg	aaa	atc	gta	aaa	gaa	gca	atc	192
Gly	His	Val	His	Leu	Gln	Glu	Phe	Gly	Lys	Ile	Val	Lys	Glu	Ala	Ile	
50				55					60							

aga	gaa	gca	ggg	ggc	gtt	ccg	ttt	gaa	ttt	aat	acc	att	ggg	gta	gat	240
Arg	Glu	Ala	Gly	Gly	Val	Pro	Phe	Glu	Phe	Asn	Thr	Ile	Gly	Val	Asp	
65				70					75		80					

gat	ggc	atc	gca	atg	ggg	cat	atc	ggt	atg	aga	tat	tcg	ctg	cca	agc	288
Asp	Gly	Ile	Ala	Met	Gly	His	Ile	Gly	Met	Arg	Tyr	Ser	Leu	Pro	Ser	
85				90					95							

cgt	gaa	att	atc	gca	gac	tct	gtg	gaa	acg	gtt	gta	tcc	gca	cac	tgg	336
Arg	Glu	Ile	Ala	Asp	Ser	Val	Glu	Thr	Val	Val	Ser	Ala	His	Trp		
100				105					110							

ttt	gac	gga	atg	gtc	tgt	att	ccg	aac	tgc	gac	aaa	atc	aca	ccg	gga	384
Phe	Asp	Gly	Met	Val	Cys	Ile	Pro	Asn	Cys	Asp	Lys	Ile	Thr	Pro	Gly	
115				120					125							

atg	ctt	atg	gca	atg	cgc	atc	aac	att	ccg	acg	att	ttt	gtc	agc	432
Met	Leu	Met	Ala	Ala	Met	Arg	Ile	Asn	Ile	Pro	Thr	Ile	Phe	Val	Ser
130				135					140						

ggc	gga	ccg	atg	gca	gga	aga	aca	agt	tac	ggg	cga	aaa	atc	tcc	480
Gly	Gly	Pro	Met	Ala	Ala	Gly	Arg	Thr	Ser	Tyr	Gly	Arg	Lys	Ile	Ser
145				150					155		160				

ctt	tcc	tca	gta	ttc	gaa	ggg	gta	ggc	gcc	tac	caa	gca	ggg	aaa	atc	528
Leu	Ser	Ser	Val	Phe	Glu	Gly	Val	Gly	Ala	Tyr	Gln	Ala	Gly	Lys	Ile	
165				170					175							

aac	gaa	aac	gag	ctt	caa	gaa	cta	gag	cag	ttc	gga	tgc	cca	acg	tgc	576
Asn	Glu	Asn	Glu	Leu	Gln	Glu	Leu	Glu	Gln	Phe	Gly	Cys	Pro	Thr	Cys	
180				185					190							

ggg	tct	tgc	tca	ggc	atg	ttt	acg	gcg	aac	tca	atg	aac	tgt	ctg	tca	624
Gly	Ser	Cys	Ser	Gly	Met	Phe	Thr	Ala	Asn	Ser	Met	Asn	Cys	Leu	Ser	
195				200					205							